

## Vessel engine block blown open in and around cylinder

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A severe engine failure occurred during a major vessel overhaul.

### What happened?

The connection rod on cylinder #12 parted from the connecting rod cap and punched a hole in the engine block. The engine had been running for 17 hours, carrying approximately a 20% load.

Parts of the engine block were found spread around the engine room, indicating that the outcome of the event could have been much worse, with potential for personnel injuries and a fire. At the time of the event, the engine room was vacated for lunch. No injuries were sustained, there was no spill of fluids and no fire.

### What went wrong?

Failure to change out and correctly torque up four temporarily installed connection rod bolts. The four bolts were temporarily installed. Preliminary investigation revealed high pressure on work schedule, poor handovers, lack of checklists and incorrect marking of cylinder #12.

### What actions were taken? What lessons were learned?

Our member noted the following:

- Focus on correct and sufficient management of change (MoC) and handovers processes.
- Use of checklists and marking/signage during work on engines.
- Limit personnel exposure during start-up of overhauled engines.

#### IOGP Life Saving Rules:



Energy isolation

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